

***PAREIRA BRAVA*: 19TH CENTURY NOTES AND  
COMMERCIAL SAMPLES FROM  
E. R. SQUIBB, M.D.**

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*RADIX PAREIRAE BRAVAE* ("root of *pareira brava*") was first introduced to Europe by the Portuguese, on the basis of its indigenous use in Brazil as a virtual panacea—with diuretic, lithontriptic, vulnerary, stomachic, cordial and alexipharmic properties (Pomet, 1692; Squibb, 1872 and Hanbury, 1873). According to Hanbury (*loc. cit.*) the first published account and illustration of *radix pareirae bravae* appeared in 1692, in Pomet's *Histoire des Drogues*. Apparently, Pomet's description and illustration provided the typology for *pareira brava*, upon which the authentication of commercial samples depended during the next two centuries.

In 1872, Edward R. Squibb, M.D., praised the utility of *pareira brava* in the treatment of "chronic diseases of the mucous membranes of the urinary passages", referring to it as "a drug which has withstood the mutations of therapeutics and commerce for nearly two hundred years." Squibb cautiously avoided the taxonomic debate over the botanical origin of the drug, and wisely warned his medical and pharmaceutical colleagues that "Under a name so indefinite as 'wild vine' or 'bastard vine'—the translation of the name *Pareira Brava*,—it is hardly possible that the markets should have always been supplied from the same plant, even after its botanical source was determined, and hence the varying descriptions of different authorities may be accounted for."

Dr. Squibb also noted that in order to be efficacious, the *pareira brava* of the New York market required administration in "doses very much larger than those prescribed by the books."

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Apparently, this aroused suspicion in Squibb's mind as to the authenticity and quality of botanical importations under the name *pareira brava*, and he began to scrutinize commercial samples more carefully. Subsequently, he noticed a very heterogeneous parcel of Brazilian *pareira brava*, recently imported from Europe, and was "surprised to find nearly one-half of it so entirely different from any hitherto seen", initially declaring it a "fraudulent adulteration or substitution". Squibb soon discovered that this new importation was actually "a mixture of stem and root", and that the "taste of the root is very much stronger, and yields at least twice as much extractive material to the menstrua." Upon closer examination, he also found that this shipment agreed quite well with many of the older published accounts of *pareira*, especially with the illustration of Pomet (loc. cit.) and conceded that "this was the true *pareira* root", and what he "had heretofore seen was the stem." Squibb thereupon concluded that "for some twelve or fifteen years past, this market has been supplied with the comparatively inert stem, instead of the root of *pareira*."

In 1873, Daniel Hanbury commented on the "extremely obscure" botanical origin of the "various stems and roots known as *Pareira Brava*", noting that most writers have referred to the drug, without question, as *Cissampelos Pareira* L., of the family Menispermaceae. Hanbury was the first to obtain and study comparatively both stems, roots *and* herbarium specimens from the same plant of *Cissampelos Pareira*, from several sources throughout the species' pantropic range: Brazil, Ceylon, Jamaica and Trinidad. Hanbury compared these authenticated specimens with the published accounts and illustration of *pareira brava*, and declared that this drug was *not* derived from *Cissampelos Pareira*: "neither the stem nor the root of the plant resembles any of the forms of that drug I had ever met with in commerce". Hanbury also gave a short history of *pareira brava*, emphasizing that *Cissampelos Pareira* in no way resembles a "wild vine" reminiscent of the grape vine, for which the Portuguese colonists in Brazil had named it "*pareira brava*". Hanbury noted further that specimens of *Chondodendron tomentosum* Ruiz & Pavón, sent to him from Brazil by Mr. Theodore Peck-

olt, conformed to the descriptions and illustrations of *pareira brava* in the literature. Upon concluding that the true *pareira brava* was derived from plants of *Chondodendron tomentosum*, Hanbury (loc. cit.) mentioned the report of Peckolt that two forms (ecotypes?) of *pareira* exist in Brazil: (1) "*Pareira brava legitima*" (N.v. "Butua"), a larger plant from drier areas and (2) "*Pareira brava miuda*" (N.v. "Butinha"), a plant of much smaller stature, and common in wetter habitats than the former. Hanbury also included a list of what he considered to be nomenclatural synonyms for *Chondodendron tomentosum*, evidently the first account of synonymy for this plant. Of special interest is Hanbury's description of a *third* sort of *pareira brava* from Guiana and northern Brazil, known there as "*Pareira brava grande*", and purportedly derived from another species of Menispermaceae—the liana *Abuta rufescens* Aublet,—which he had never before seen in commerce. Hanbury also was convinced that the shipment of *pareira brava* described by Squibb (1872), as a mixture of stem and root of the same plant, must also have been *Chondodendron tomentosum*, rather than *Cissampelos Pareira*.

Hanbury's generic determination of *pareira brava* as *Chondodendron* was later supported by Krukoff and Moldenke (1938), although these authors identified *both* of the specimens ("forms") sent by Peckolt to Hanbury, as *Ch. platyphyllum* (A. St. Hil.) Miers rather than *Ch. tomentosum*, on the basis of floral morphology. Krukoff and Moldenke also suspected that *Ch. microphyllum* (Eichl.) Moldenke, a close, south Brazilian relative of *Ch. platyphyllum*, may also represent a source of commercial *pareira brava*; this was later confirmed by Krukoff and Barneby (1970).

Squibb (1872) had commented that importations under the name of *pareira brava* probably were of heterogeneous botanical origin, a belief more recently reiterated by both Thomas (1963) and Morton (1977). The phytochemical heterogeneity of *radix pareira bravae* was suspected by Squibb (loc. cit.), who noted a difference in both taste and dosage requirements between root and stem, and confirmed by King (1940, 1946), who first isolated the alkaloid bebeerine from *Radix pareirae bravae*. King dem-

onstrated that *Radix pareirae* prepared from *Chondodendron microphyllum* yields *d-bebeerine*, whereas that obtained from *Ch. platyphyllum* yields *l-bebeerine*! The pharmacologic and commercial significance of these phytochemical data are self-evident, and they served to underscore the suspected plant taxonomic heterogeneity, of imports under the general name of *pareira brava*. More recently, Krukoff and Barneby (1970) noted the different pharmaceutical uses of *Chondodendron* species: *Ch. tomentosum* as the preferred source of d-tubocurarine, whereas both *Ch. microphyllum* and *Ch. platyphyllum* provide the "source of the drug known in pharmacy as '*radix pareirae bravae*'."

Two hundred years of nomenclatural and taxonomic confusion over the botanical identity of *pareira brava* is hardly surprising from an ethnobotanical perspective. Among indigenous peoples of the Amazon basin, various mixtures of taxonomically diverse, tropical lianas and other plants are used in the preparation of arrow and dart poisons, collectively referred to as "curare". In most cases, species of either the genus *Strychnos* (Loganiaceae) or *Chondodendron* (Menispermaceae) are added as the major, active principle of curare (Krukoff & Smith, 1937). At least five species of *Chondodendron* have been used in curare preparation by various Amazonian tribes (Krukoff and Moldenke, 1938). Furthermore, other genera of Menispermaceae are used in curare recipes, by various tribes and/or in different regions of the Amazon, including *Abuta*, *Anomospermum*, *Cissampelos* and *Sciadotenia* (Krukoff and Smith, 1937, 1939). These authors also noted that the Canelos of the Río Conambu basin in Ecuador sometimes substitute *Cissampelos Pareira* for *Chondodendron tomentosum* in their curare preparations, but refer to both taxa by the same common name. Similarly, Morton (1977) notes that in commerce, the "root" of the pantropic *Cissampelos Pareira* ("*false pareira*") often is substituted for "*true pareira root*". She considers the true drug to be *Chondodendron tomentosum*, in accord with Hanbury (1873) but contrary to the conclusion of Krukoff and Moldenke (1938), who believe *pareira brava* to be derived from *Ch. microphyllum* and *Ch. platyphyllum*. It would appear that, at least in the minds of the Amazonian natives, "*pareira brava*" was a very general term,

imprecisely applied to diverse genera and species of Menispermaceae, which often are employed in curare preparation and collected for export to the pharmaceutical industry.

#### RADIX PAREIRAE BRAVAE: *Root or Rhizome?*

Historically, the “*radix*” of “*pareira brava*” has been interpreted as the “root” of the plant (literal translation), an apparent plant morphological misnomer for the part actually used, which hitherto has not been challenged in the botanical or pharmaceutical literature. Although no distinction among root, rhizome and aerial stem of *pareira brava* has appeared, all published descriptions of the so-called, “root of *pareira*” clearly are more characteristic of *Chondodendron* rhizomes, than of its roots and aerial stems.

Pomet’s original description and illustration of “*pareira brava*” root (1692) clearly suggests a rhizome rather than a true root, as is evident in the 1712 translation of his account: “that the said Root, as it grows in the Ground, shoots forth Branches charg’d with Leaves, altogether like the Vine which creeps along Walls and upon Trees.” Squibb (1877) also referred to “the part which I perhaps mistakenly considered to be the root, but is without much doubt the substance described by the older writers”, perhaps thinking that this might not be a true root in the botanical sense. Hanbury (1873) described “roots bearing some leaves”, and notes that “In Mr. Francis’ drug there are young roots having the remnants of green aerial stems arising from their upper part. . .”. By definition, of course, roots *never* bear leaves.

Even more recently, this apparent misapplication of the term “root” to *pareira brava* rhizomes has been perpetuated. Morton (1977) thoughtfully presented a whole-plant morphological diagnosis for *Chondodendron tomentosum*, which she considers to be the *true pareira brava*, but referred to the plant part used medicinally as the “root”, rather than rhizome. However, the morphological description which she gives for the rhizome of *Chondodendron tomentosum* is virtually identical to all historical descriptions of the so-called “*pareira root*”, as contrasted with its very different, woody stem.

Diagnostic features which have repeatedly been published for "*pareira root*" include: (1) a very dark, almost black color; (2) transverse constrictions or furrows; (3) longitudinal wrinkles, and often, (4) green leafy shoots arising from the upper sides of the "root". Together with the descriptions, published illustrations of "*pareira root*" clearly suggest the morphology of a subterranean rhizome; probably with jointed nodes ("transverse constrictions"), scale-leaves with axillary buds giving rise to leafy aerial shoots, and perhaps an occasional foliage leaf borne upon light-exposed nodes of the rhizome.

Although this may seem a minor semantic distinction relevant only in comparative plant morphology, its potential commercial and practical significance in medicine cannot be overemphasized. The necessity of such accurate morphological distinctions was fully appreciated by Dr. Squibb (1872, 1877), who noted differences in both potency and efficacy, of "*pareira roots*" as compared with its "woody stems". It is widely recognized among botanists and chemists, furthermore, that different organs of an individual plant often reveal both qualitative and quantitative chemical differences and different pharmacological effects (*e.g.*, Manske and Holmes, 1950). As noted by Thomas (1963), the comparative phytochemistry of *pareira brava*, curare plants and other Menispermaceae is incompletely understood. Ideally, future phytochemical investigations of this family (and plants in general) should carefully distinguish among the (1) plant organs being analyzed, (2) their relative maturity and vigor, and (3) the precise ecological conditions experienced by the individual.

#### A LETTER AND PAREIRA BRAVA SPECIMENS FROM E. R. SQUIBB

Dr. Squibb was fully aware of the probable, botanical heterogeneity of commercial *pareira brava*, as indicated by the foregoing excerpts from his 1872 publication. In 1877, he sent a letter of enquiry (Plate 1; Transcription #1), four commercial samples of *pareira brava* (Plates 3-6), and a certificate of authenticity from the importers pertaining to one of these *pareira* shipments (Plate 2; Transcription #2) to Professors

George Goodale and Asa Gray of Harvard University, *via* his son (E. H. Squibb) who resided in Cambridge, Massachusetts. Dr. Squibb had collected these *pareira* samples in the New York market since 1865, apparently since he suspected them to be of diverse botanical origin, and sent them to Harvard for professional identification on the basis of "Structural Botany". These samples were either ignored or misplaced for over 100 years, before I found them as indetermined and unaccessioned samples in the Harvard Wood Collection.

Dr. Ralph H. Wetmore, co-founder of the Harvard Wood Collection and the Bailey-Wetmore Laboratory of Plant Anatomy and Morphology, wherein the wood collection resides, noted that he had never before seen these *pareira* samples nor the accompanying letter from E. R. Squibb (pers. comm., 1982). Dr. Wetmore also feels certain that the late Dr. Irving W. Bailey, similarly, had known nothing of these specimens. Furthermore, a search of Professor Gray's correspondence in the archives of the Gray Herbarium at Harvard, revealed no communication on this matter, with either Dr. Squibb or his pharmaceutical company.

Since accurate taxonomic determinations of these *pareira brava* specimens were not really possible until this year, at least on the basis of comparative stem anatomy alone, it is not surprising that Squibb's queries remained unanswered for more than a century. At the time of my discovery of these materials, fortunately, Dr. Alberta M.W. Mennega (Rijksuniversiteit, Utrecht, The Netherlands) had just published an article on the stem anatomy of the neotropical Menispermaceae (1982), and kindly agreed to identify Squibb's specimens on the basis of their anatomy.

In reference to *pareira brava* shipments from South America, Squibb commented to his son that "within the last half century much of it has come direct and probably many different substances have been sent under the one name." His suspicion had been aroused, in particular, by a recent importation of *pareira brava* from Brazil, to which he alluded in his letter: "On seeing this new lot from Pará, it was so different from anything I had ever seen before that I expressed doubt as to its being the proper

substance.” He thereupon advised the importers that this lot was suspiciously different from all previous *pareira brava* imports, and they wrote to Pará for a certificate of authenticity and matching specimen, pertaining to this new shipment. Unfortunately, the exact sample sent with the certificate from Pará is not known (Squibb, 1877: “the piece tied with the green ribbon is one of the three official pieces to which the certificate now applies”), since I was unable to find any green ribbon within parcel No. 1. However, Squibb stated that this certificate also pertained to “samples . . . marked No. 1” (Plate 3). These specimens have been identified as a species of *Abuta*, rather than *Cissampelos Pareira* as stated in the certificate. (Note here that the certificate also refers to these under the vernacular name “*Abutúa*”) Squibb’s clarity of perception was truly amazing, especially for one not trained professionally in botany or plant morphology. The samples of his parcel No. 1 were indeed a different genus and species altogether, from what he had previously seen and had regarded “as the true drug”—his specimen parcel No. 4 (below and Table 1). Hence, this large *pareira* shipment (parcel No. 1) was totally different from what both Hanbury (1873) and Squibb considered to be the true *pareira brava*—*Chondodendron tomentosum* Ruiz & Pavón.

Squibb noted that “Specimen No. 2 is from another recent importation” and that “On looking at this in a large open bale a more heterogeneous pile of sticks can hardly be imagined” (Plate 4; Table 1). He also noted that “It has not the uniformity of appearance of the bales of No. 1, but looks as though all ‘wild vines’ of whatever kind might have been collected and sent to market in one lot”. This parcel contains a mixture of both “stem and root”, as Squibb had surmised on the label and note included within the parcel, and also had previously commented about other importations of *pareira brava* (1872). Dr. Mennega suspects that this sample No. 2 might be *Cissampelos Pareira*, which the Brazilians appear to have regarded as the “*true pareira brava*”, and in this respect, represented the most nearly authentic of the four specimen parcels which Squibb sent to Harvard. Although Squibb was uncertain as to its authenticity, his observation that Sample No. 1 was more uniform than No. 2 was



**TABLE 1.**

*Pareira Brava* Commercial Samples in the Harvard Wood Collection, sent by E. R. Squibb, M.D., in 1877.

<i>Dr. Squibb's Parcel Number</i>	<i>Harvard Wood Collection #</i>	<i>Taxonomic Affinity and Comments*</i>
**No. 1	Aw 33441	<i>Abuta brevifolia</i> Krukoff & Moldenke or <i>A. obovata</i> Diels, from the Amazon Delta and coastal regions of northern South America; or <i>A. panurensis</i> Eichler, from near Manaus, Brazil.
No. 2	Aw 33442	could be <i>Cissampelos Pareira</i> L.
No. 3	Aw 33443	most probably <i>Abuta rufescens</i> Aublet.
No. 4	Aw 33444	<i>Sciadotenia</i> sp.; might be <i>Sciadotenia cayennensis</i> Benth., <i>Sc. paraënsis</i> (Eichl.) Diels or <i>Sc. sagotiana</i> (Eichl.) Diels, all growing in the coastal areas, and much alike in their anatomy.

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\*Taxonomic affinities and comments courtesy of Dr. A. M. W. Mennega, Rijksuniversiteit, Utrecht, The Netherlands.

\*\*Commercial sample from Squibb to which the certificate of authenticity applies (see Plate 2 and Transcription #2).

well-founded, since this sample consists entirely of stem pieces derived from a species of *Abuta* (Plate 3).

Squibb's Specimen parcel No. 3 is "the *Pareira Brava* of the N.Y. market about 1865 to 1869", and he noted that "when black pieces appeared among these about 1869, they were at first supposed to be a different substance"; however, he soon realized that this earlier lot had been a mixture of "stem and root", whereas the more recent, parcel No. 3 contained only pieces of the stem (cf. Squibb, 1872). In his note which accompanied this individual parcel, Squibb accurately referred to the material as what he "supposed to be the woody stem of true *Pareira Brava*". Dr. Mennega noted that this is probably *Abuta rufescens*, a liana often referred to as "*Pareira brava rouge*". This species also had been described by Hanbury (1873) as a third "sort" of *pareira brava*, but one which he had never seen in commerce. It appears as though Squibb, similarly, had never encountered this species in the market, since he made no mention of it as one

possible origin for *pareira brava*, either in his publication (1872) or the letter to his son (1877).

Dr. Squibb considered Specimen parcel No. 4 “as the true drug, and the desirable part of the plant for medicinal uses”. Although he was uncertain as to the exact botanical origin of true *pareira brava*, he apparently considered this sample to be either *Cissampelos Pareira*, or the *Chondodendron* described by Hanbury (loc. cit.). Dr. Menega, however, identified this sample as a species of *Sciadotenia*. I have found no reference in the literature to this genus as a commercial source of *pareira brava*, although it is sometimes used in curare (Krukoff and Smith, 1937, 1939). Since this genus may be substituted for other menispermaceous taxa in curare preparation, such as *Abuta* and *Chondodendron*, Squibb’s parcel No. 4 may have been collected by Brazilian natives of the Amazon basin as a saleable substitute for the “true *pareira*”. As noted previously, different genera and species of Menispermaceae, used in curare preparation throughout the Amazon, often are referred to by the natives under the same common name. It is very interesting that Squibb refers to this lot as the drug “commonly met with in the N.Y. market from 1865 to 1869”. Perhaps the apparently fraudulent nature of this material can account for the “set of very feeble preparations”, made from imports of the drug during this period, to which Squibb alluded in his letter of 1877.

More than a century later, we can now answer Dr. Squibb’s major queries regarding these various importations, as originally presented to Goodale and Gray: (1) “whether the compact and spongy pieces of 2, 3 and 4 really belong to the same plant, or not”, (2) “and if so whether it be as root and stem as I had supposed”, (3) “whether No. 1 is the same or a different plant,—or what it really is.”, (4) “Whether the certificate amounts to anything”, and (5) “whether this be not really *Cissampelos*, when we require not that, but *Chondodendron*”.

To his first question the answer is clearly “No”; these three samples belong not only to different species, but also to *three different genera* of Menispermaceae (Table 1). Secondly, both “root and stem” appear only in parcels No. 2 (*Cissampelos Pareira*; Plate 4) and No. 4 (*Sciadotenia* sp.; Plate 6), while only

stem pieces are included within parcel No. 3 (*Abuta rufescens* = "*pareira brava rouge*"; Plate 5). Thirdly, sample No. 1 from Dr. Squibb is not the same plant as contained in the other three parcels, and although it is congeneric with parcel No. 3, it appears to be a different species of *Abuta* from that of parcel No. 3 (Plates 3–6; Table 1). Whether the certificate of authenticity really amounted to anything or not remains unclear, since the piece with the green ribbon was not located in parcel No. 1. If Squibb and the importers were correct, however, in their belief that Specimen parcel No. 1 and the certified piece with the green ribbon were of the same material shipped from Pará, then the certificate was invalid, at least with regards to botanical taxonomy. The certificate claimed that this material was *Cissampelos Pareira*, when in fact it is a species of *Abuta*.

Perhaps the most amusing and ironic fact, in regard to Squibb's final question, is that none of the material in his shipment to Harvard belongs to the genus *Chondodendron*. To my knowledge, the only species of curare-plants of the Menispermaceae ever exploited commercially by E.R. Squibb & Sons, Inc. is *Chondodendron tomentosum*, the preferred source of d-tubocurarine. Although E.R. Squibb seems to have had the keen eye of a professional botanist and the pharmacognostic insight of a 19th century physician,—in suspecting that the *pareira brava* which he and his colleagues really required was *Chondodendron* rather than *Cissampelos*,—he appears never to have received any specimens of what modern botanists consider to be genuine *pareira brava*, from either Europe or South America.

#### ACKNOWLEDGEMENTS

Many thanks are due to Dr. Alberta M.W. Mennega (Rijksuniversiteit, Utrecht, The Netherlands) for her kind cooperation and prompt taxonomic determination of Squibb's commercial specimens of *pareira brava*. I am also grateful to Professor Richard Evans Schultes (Director, Harvard Botanical Museum) for his encouragement and for financing the preparation of photographic plates, with a grant from the National Institutes of Health, for research on the Ethnopharmacology of the north-

west Amazon. This study was completed by the author while supported as a Katherine Atkins Postdoctoral Fellow in Tropical and Economic Botany at Harvard University.

#### REFERENCES CITED

- Hanbury, Daniel. 1873. "On Pareira Brava". *Pharm. Jour. and Trans.* London, pp. 81-82 and 102-103. (August 9, 1873).
- King, H. 1940. Alkaloids of some *Chondodendron* Species and the Origin of *Radix Pareirae Bravae*. *Jour. Chem. Soc.* p. 737.
- \_\_\_\_\_. 1946. Botanical Origin of Tube-Curare. *Nature* 158: 515.
- Krukoff, B. A. and R. C. Barneby. 1970. Supplementary notes on American Menispermaceae. VI. *Mem. New York Bot. Gard.* 20(2): 1-70.
- \_\_\_\_\_. and H. N. Moldenke. 1938. Studies of American Menispermaceae with Special Reference to Species used in Preparation of Arrow Poisons. *Brittonia* 3(1): 1-74.
- \_\_\_\_\_. and A. C. Smith. 1937. Notes on the botanical components of curare. *Bull. Torrey Botanical Club* 64: 401-409.
- \_\_\_\_\_. and \_\_\_\_\_. 1939. *Ibid.* Part II. *Ibid.* 66: 305-314.
- Manske, R. H. F. and H. L. Holmes, eds. 1950. *The Alkaloids: Chemistry and Physiology*. Vol. I. Academic Press, Inc., New York.
- Mennega, A. M. W. 1982. Stem Structure of the New World Menispermaceae. *Jour. of the Arnold Arboretum (Harvard University)* 63: 145-171.
- Pomet, Msr. 1692. *Histoire des Drogues*. Paris
- \_\_\_\_\_. 1712. *The Compleat History of Drugs*. English translation, Vol. I. ("Done into English from the Originals"). London.
- Squibb, E. R., M.D. 1872. "Notes on Pareira". *Amer. Jour. Pharm.* p. 107-109.
- \_\_\_\_\_. 1877. A letter written to his son, E. H. Squibb (Transcription #1 and Plate 1, herein), which is located in the Harvard University Wood Collection, Botanical Museum, Cambridge, MA.
- Thomas, K. B. 1963. *Curare: Its History and Uses*. J.B. Lippincott Co.

## APPENDIX

*Transcription #1:* Letter from E. R. Squibb, M.D. of Brooklyn, N.Y. to his son, E. H. Squibb of Cambridge, Mass., concerning four parcels of "Pareira Brava" sent with the letter for taxonomic determination by Professors Goodale and Gray of Harvard University. April 10, 1877.

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E. R. Squibb, M.D.  
Brooklyn, N.Y.

Brooklyn April 10, 1877

E. H. Squibb  
Cambridge

My dear son,

By express today I send a parcel containing specimens of the drug called Pareira Brava, which I offer for acceptance by Drs. Goodale or Gray and I would very much like to have the opinion of one or the other of these gentlemen on a single point which I will try to make clear, and try to show the importance of in the following outline sketch.

This drug in common with many others reached France and England through Portugal from South America; and by its utility in affections of the mucouslinings of the kidneys and bladder it became a well established article of the materia medica nearly two centuries ago. And it has retained that reputation without much modification ever since, and probably will retain it if the identity and integrity of the substance can be protected against cupidity. Its reputation came to us from Great Britain, and the best parcels of the drug have always reached us from either the London, or north German markets, but there always at a high price compared with that sent for and obtained directly from South America. Hence within the last half century much of it has come direct, and probably many different substances have been sent under one name. Under these conditions (overleaf) its reputation can derive and it was in danger of being lost through want of knowledge in discriminating the character and quality of substances sent under the name "Pareira Brava". I myself was for many years in the obscurity of ignorance in regard to it and almost accidentally became aware of my ignorance. In 1871 I published a note on the subject in the Proceedings of the American Pharmaceutical Association. This was copied into the American Journal of Pharmacy for March 1872 and will be found on page 107 of the volume for 1872.

In 1873 Daniel Hanbury reexamined the subject in a paper which will be found in the London Pharm. Journal and Trans. for 1873, Vol. IV, p. 81-102. This paper was extensively republished,

(*Transcription #1. continued*)

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and is found in the volume of "Science Papers, D. Hanbury", published since his death.

What I believed to be stem and root of the same plant, Hanbury seems to regard as being from different plants,—the one a spurious drug, the other the true one.

My own experience and his paper have served to keep me in a certain track since 1870, and I have only used what I considered to be the true root as described by Pomet, "History of Drugs", rejecting what I considered as the woody stems. Prior to 1868 when I used the woody stems, and did not know the part since used, a set of very feeble preparations resulted of which I never knew anything good or bad. But since that time, when only the part which I perhaps mistakenly considered to be the root,—but which is without much doubt the substance described by the older writers,—the fluid extract made from this, has been used to a very considerable extent, by many pretty close observers of therapeutic effects, with pretty definite good results, so that the drug after having declined in reputation and in usage for many years, has now for the past two or three years been again growing into favor especially in the treatment of that very troublesome class of cases which unless well managed degenerate into incurable chronic inflammation of the bladder.

As it now is growing in favor, the importers of drugs are on the alert for the profits, and accordingly two months ago a shipment of "*Pareira Brava*" appeared in this market direct from Pará,—the market being previously supplied by a rather curious mixture, in large quantity,—not in the characteristic baskets,—but simply in bagging. On seeing this new lot from Pará it was so different from anything I had ever seen before that I expressed doubts as to its being the proper substance. As the importers had full confidence in their drug, and in the correspondent who sent it, and yet had some respect for my judgement, and the effect it might have on their market for their shipment, they wrote out to Pará in regard to it, and have just received a very formidable looking certificate verified by consular certificate,—as to the character of the importation. At my request they have given me a copy of the material parts of this certificate, and this I enclose here within. The samples of this substance are marked No. 1 and the piece tied with green ribbon is one of three official pieces to which the certificate (overleaf) now applies, and which accompanied the certificate. The other pieces marked No. 1 are from the large shipment. The yellow color and bitter taste of this substance seems to be due to berberina. The taste is quite different from that of the specimens which I have supposed to be the true *Pareira Brava*. Is this *Cissampelos* as stated, and the other *Chondodendron* of Hanbury?

Specimen parcel No. 2 is from another recent importation, large quantities of which are now in the market. On looking at this in a large open bale a more heterogeneous pile of sticks can hardly be

imagined, or one which from appearance could be less adapted to anything like accurate medication. It has not the uniformity of appearance of the bales of No. 1 but looks as though all "wild vines" of whatever kind might have been collected and sent to market in one lot. A very large proportion of the whole however is on close examination found to be either hard, compact, and comparatively tasteless pieces, or light brown color externally, or the nearly black spongy (stringy?) pieces, such as I formerly supposed to be the stems and roots of the same plant, and that the true *Pareira Brava*.

Specimen parcel No. 3 is the *Pareira Brava* of the N.Y. market about 1865 to 1869, and when the black pieces appeared among these about 1869, they were at first supposed to be a different substance, see Amer. Jour. Pharm. Mar. 1872 p. 107. On referring to the older writers however the black pieces were supposed to be the true drug, and these to be stems of the same plant.

Specimen parcel No. 4 is what I regard as the true drug, and the desirable part of the plant for medicinal uses. And the small internal parcel contains what I consider to be typical specimens of the required part.

Now what I hope for in referring this matter to Drs. Goodale or Gray, is, that Structural Botany may be able to decide first whether the compact and spongy pieces of 2, 3 and 4 really belong to the same plant or not, and if so whether it be as root and stem, as I had supposed.

"second, whether No. 1 is the same of a different plant,—or what it really is. Whether the certificate amounts to anything, and if it does whether this be not really *Cissampelos*, when we require not that, but *Chondodendron*.—And what I most desire too, is not to tax the time of either of the gentlemen too far.

No signature—End of page

*Transcription #2.* Certificate of authenticity presented to E. R. Squibb by Lehn & Fink, Importing and Jobbing Druggists of New York, pertaining to the recent importation of Pareira Brava from Pará, Brazil. Dated February 23, 1877. (pertaining to Squibb's specimen parcel No. 1)

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LEHN & FINK,  
Importing and Jobbing Druggists  
160 William Street

P.O. Box 3114

New York, \_\_\_\_\_ 187\_\_

Copy of a Certificate of examination of a lot of Pareira Brava, shipped from Pará, Brazil to Lehn & Fink New York in March 1877.

Pará February 23<sup>rd</sup>, 1877

I, Dr. Francisco da Silva Castro, Commander of the Imperial Order of the Rose, Chevalier of the order of Christ, Commander etc etc etc— Member of the Royal Academy of Science of Stockholm etc etc— Inspector of Public Health of the Province of Gran Para etc etc

Certify that the pieces or fragments of the Vegetable, which has been handed to me by Mess.: Elpidio R. da Costa & Co., Chemists established in this Capital in the Chemistry Shop known as: "Pharmacia Minerva" and which are the true and genuine Abú-tua, of the wild forests of this province.

This vegetable belongs to the family of the Menispermæ, and its botanical or technical name is "Cissampelos Parreira", that of "Abú-tua" is the most common and usual; the Indians call it "Caá-peba" in the tupy languages and the Villagers "Cipo de Cobra". The ancient Portugeses (over) called it "Parreira Brava" and the Jesuit Missionaries "Cipo de Nossa Senhora". In some of the southern Provinces it is called "Oretha de Onca".

There are different varieties all of them however possessing the same powers and medicinal properties, well studied and known in science.—etc etc

signed Dr. F. dS.C.

(Consul's certificate accompanied  
by Andrew Cone, Pará, March 15, 1877)

Submitted for kind perusal to  
E. R. Squibb, M.D.

Respectfully,  
Lehn & Fink



PLATE 1



E. R. SQUIBB, M.D.  
BROOKLYN, N. Y.

BROOKLYN April 10th 1877

E. H. Squibb  
Cambridge.

My dear son,

By express to day I send a parcel containing specimens of the drug called *Pavina Brava*, which I offer for acceptance by Drs Goodale or Gray, and I would very much like to have the opinion of one or the other of these gentlemen on a single point which I will try to make clear, and try to show the importance of in the following outline sketch.

This drug in common with many others reached France and England through Portugal from South America; and by its utility in affections of the Mucous Linings of the Kidneys and Bladder it became a well established article of the materia medica nearly two centuries ago, and it has retained that reputation with much modification ever since, and probably will retain it if the identity and integrity of the substance can be protected against *superfidity*. Its reputation came to us from Great Britain, and the best parcels of the drug have always reached us from either the London, or North German markets, but then always at a high price compared with that now for and obtained directly from South America. Hence within the last half century much of it has come direct, and probably many different substances have been sent under the one name. Under these conditions

Plate 1. Original letter and envelope from E. R. Squibb, M.D., to his son, E. H. Squibb. Dated April 10, 1877. (See complete letter transcription on previous pages.)

PLATE 2

LEHN & FINK,  
Importing and Jobbing Druggists,

160 WILLIAM STREET.

P. O. Box 3114.

New York, 1877

Copy of a Certificate of examination of  
a lot Pareira Brava, shipped from Para, Brazil  
to Lehn & Fink New York in March 1877.

Para February 23<sup>d</sup> 1877

I, Dr. Francisco da Silva Castro, Commander of  
the Imperial of Order of the Rose, Chivalier of the order  
of Christ, Commander etc etc etc - - Member of  
the Royal Academy of Sciences of Stockholm etc etc - -  
Inspector of Public Health of the Province of San Paulo  
etc etc

Certify that the pieces or fragments  
of the Vegetable, which has been handed to me by  
Mrs. Elpidio A. da Costa & Co., Chemist established  
in this Capital in the Chemistry Shop known as  
"Pharmacia Mineira" and which are sealed with the  
Seal of my name are of the true and genuine  
Abitica, of the wild forest of this province.

This vegetable belongs to the family of the  
Menispermaceae, and its botanical or technical  
name is Cissampelos Parrara, that of Abitica  
is the most common and usual; the Indians  
call it "baápeba" in the Tupi languages and the  
Villagers "Cipo de cobra". The ancient Portuguese

Plate 2. Certificate of authenticity given to E. R. Squibb, M.D., by Lehn & Fink, Importing and Jobbing Druggists of New York, identifying Squibb's specimen parcel No. 1 as *Pareira Brava*, derived from *Cissampelos pareira* L. Dated on February 23, 1877. (See transcription on page 42.)

PLATE 3



Plate 3. *Pareira Brava*: Squibb's specimen parcel No. 1, from an 1877 importation from Pará, Brazil, and accompanied by a copy of the certificate of authenticity (Plate 2), stating this plant as belonging to *Cissampelos pareira*. ACTUAL IDENTITY: *Abuta* sp. (Aw 33441)

PLATE 4



*[Faint, illegible handwritten notes on a piece of paper, possibly a label or field notes.]*

HARVARD UNIVERSITY WOOD LABORATORY

aff. *Cissampelos pareira* L.

Parcel No. 2 with parcel:

"Specimen No. 2, Pareira Brava, selected out from a bale of recent importation. About one half the bale being the lighter-colored compact pieces."

"Supposed to be stem, and the remainder the darker pieces - supposed to be root."

Plate 4. *Pareira Brava*: Squibb's specimen parcel No. 2, from an 1877 importation, consisting of both "stem and root" as noted by Squibb. ACTUAL IDENTITY: aff. *Cissampelos pareira* L. (Aw 33442)

PLATE 5

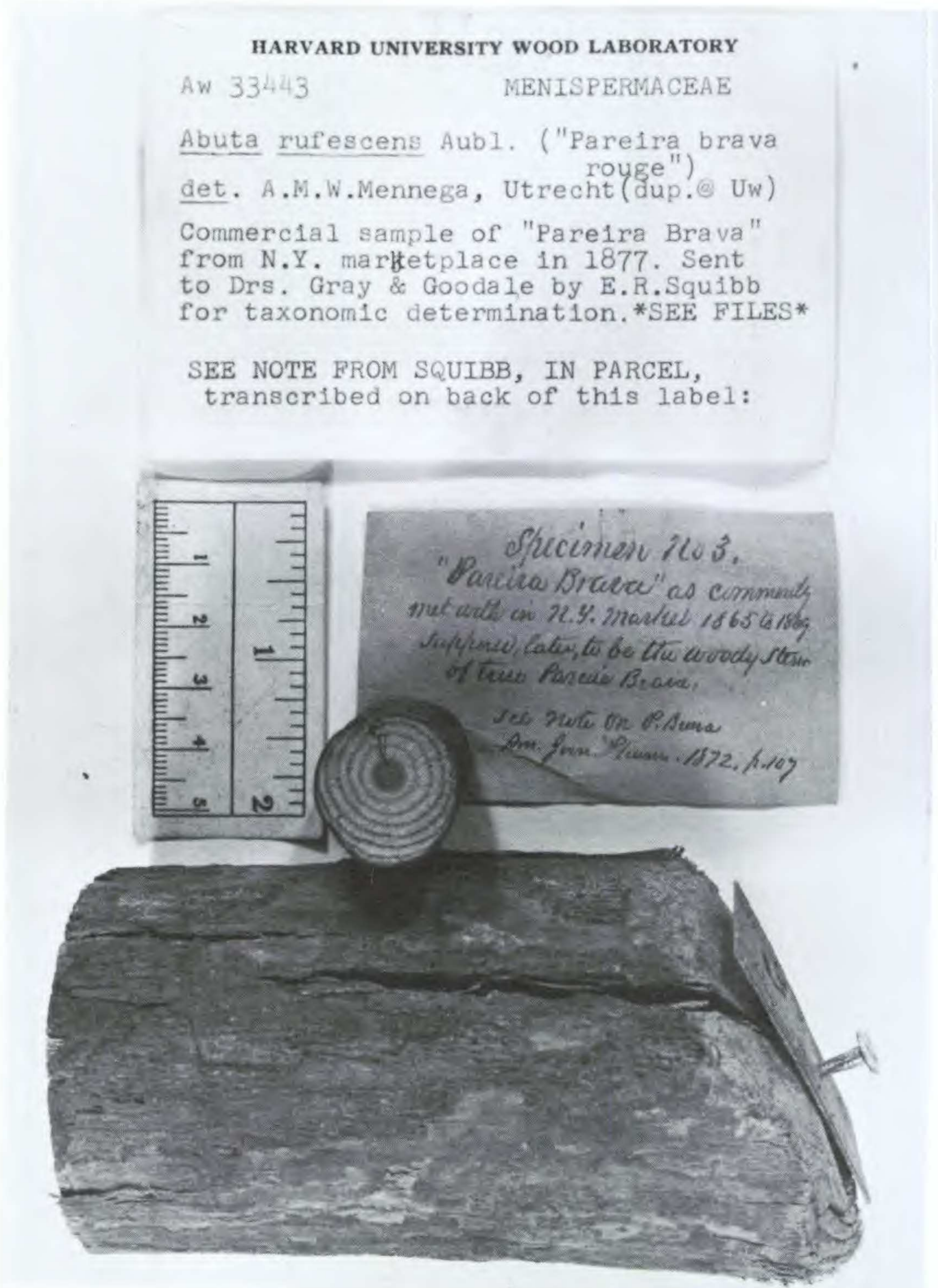


Plate 5. *Pareira Brava*: Squibb's specimen parcel No. 3, to which Squibb referred as "the *Pareira Brava* of the N.Y. market about 1865 to 1869" and considered to be pieces of "the woody stem". ACTUAL IDENTITY: *Abuta rufescens* Aublet, "*Pareira brava rouge*." (Aw 33443)

PLATE 6

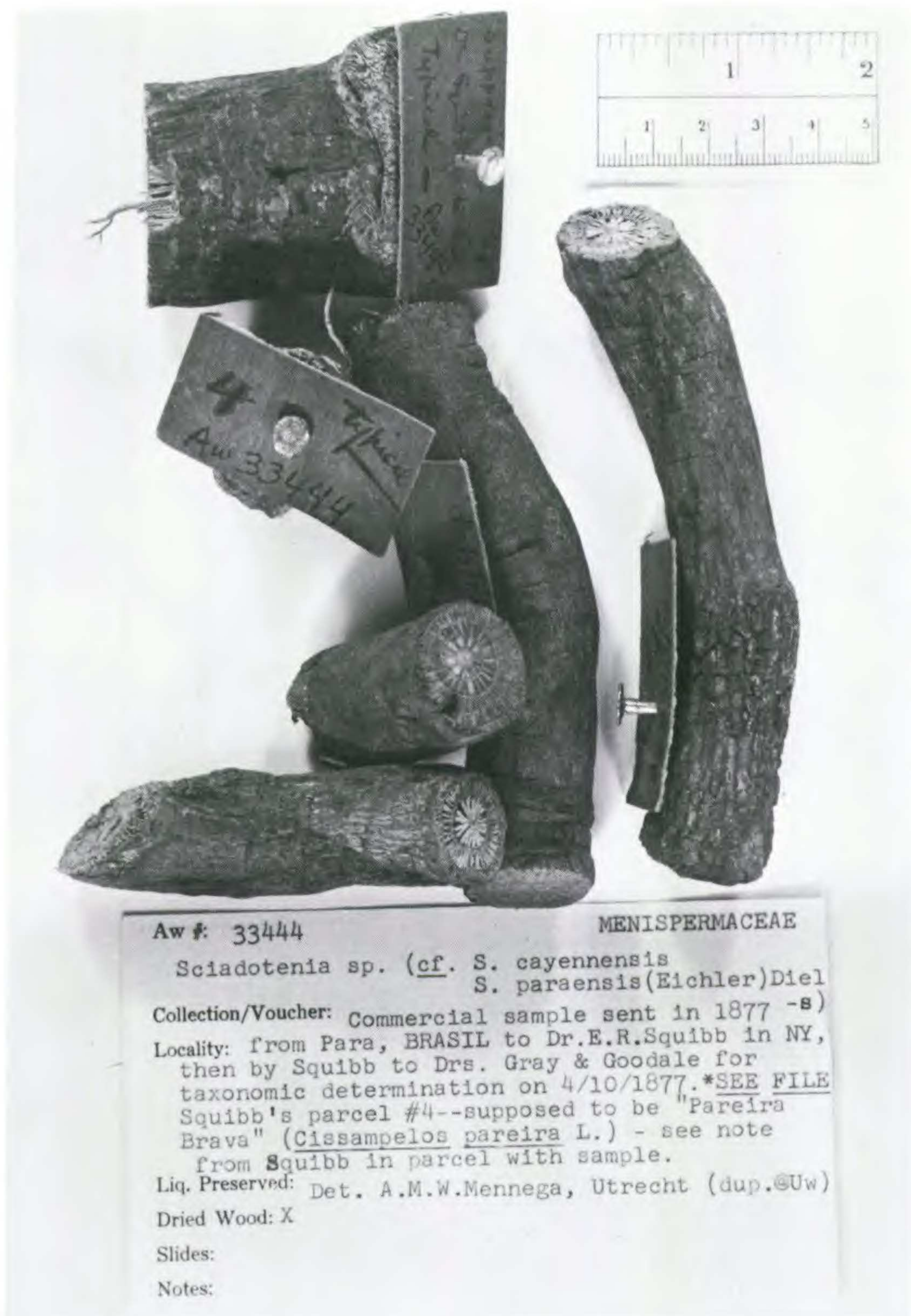


Plate 6. *Pareira Brava*: Squibb's specimen parcel No. 4, to which he referred as "the true drug, and the desirable part of the plant for medicinal uses". ACTUAL IDENTITY: *Sciadotenia* sp. (Aw 33444)